AMENDMENTS TO THE CLAIMS

Claim 1. (currently amended):   An image recognition device, for detecting arbitrary images, comprising:

an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with the corresponding target pattern elements of a target pattern; and

a pattern detection means to detect relative positions of said plurality of input pattern elements compared with a multiple magnification reference arrangement data of each of said target pattern elements in order to recognize whether said input image includes said target pattern.

Claim 2. (currently amended):   An image recognition device, for detecting arbitrary images, comprising:

a dictionary generating unit which stores dictionary data for each pattern element in a target pattern;

an element matching unit, which compares and matches input image pattern data which is provided as input against said dictionary data stored in said dictionary generating unit;

an arrangement data generating unit which stores the position data representing the arrangement of each of the target pattern elements at a plurality of magnifications; and

a pattern detection unit, which based on the output of said element matching unit and said position data from said arrangement data generating unit, determines whether

said target pattern can be found in said input image pattern data.

Claim 3. (original): The image recognition device of claim 2, wherein said dictionary generating unit comprises a software routine.

Claim 4. (original): The image recognition device of claim 2, wherein said element matching unit comprises a software routine.

Claim 5. (original): The image recognition device of claim 2, wherein said arrangement data generating unit comprises a software routine.

Claim 6. (original): The image recognition device of claim 2, wherein said pattern detection unit comprises a software routine.

Claim 7. (currently amended):   An image processing device, for detecting arbitrary images, comprising:

an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with the corresponding target pattern elements of a target pattern;

a pattern detection means to detect relative positions of said plurality of input pattern elements compared with a reference arrangement data, at multiple magnifications, of each of said target pattern elements in order to recognize whether said input image includes said target pattern; and

a control means to control output of said input image to an output device when said pattern detection means recognizes said input image includes said target pattern.

Claim 8. (original): The image processing device of claim 7, wherein said output device comprises a printer.

Claim 9. (original): The image processing device of claim 7 further comprising a scanner to input said input image into said image processing device.

Claim 10. (original): The image processing device of claim 7 further comprising a digital camera to input said input image into said image processing device.

Claim 11. (original): The image processing device of claim 7 further comprising a floppy disc to input said input image into said image processing device.

Claim 12. (original): The image processing device of claim 7 further comprises a personal computer to facilitate copying of said input image.

Claim 13. (currently amended): A recording medium containing computer code for implementing an image recognition method[[,]] for detecting arbitrary images, said recording medium comprising:

a storage area having stored thereon a computer code, said computer code comprising:

an element matching means to match a plurality of input pattern elements obtained by dividing an input image into a plurality of regions with corresponding target pattern elements of a target pattern; and

a pattern detection means to detect relative positions of said plurality of input pattern elements compared with a multiple magnification reference arrangement data of <u>each of</u> said target pattern elements in order to recognize whether said input image includes said target pattern.

Claim 14. (currently amended)   A method of processing an image, said method comprising:

inputting a reference image,[[;]] <u>said reference image being an arbitrary image;</u>

determining target pattern elements for said reference image by dividing said reference image into a plurality of regions;

determining reference arrangement data for <u>each of</u> said target pattern elements at a plurality of magnifications;

inputting data for an input image;

determining input elements for said input image by dividing said input image into said plurality of regions corresponding to said reference image; and

comparing said target pattern elements and said input elements.

Claim 15. (previously presented): The method of claim 14, wherein said comparing comprises comparing said target pattern elements and said input elements relative position to each other using said reference arrangement data.

Claim 16. (previously presented): The method of claim 14, further comprising halting if said target pattern elements include said input elements based on said comparing.

Claim 17. (original): The method of claim 14 further comprising changing the color of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.

Claim 18. (original): The method of claim 14 further comprising reducing the resolution of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.

Claim 19. (original): The method of claim 14 further comprising superimposing an alphanumeric character on top of a reproduction of said input image if said target pattern elements include said input elements based on said comparing.